

Acid Fast Bacillus (AFB) Culture & Smear

Administering Department: Microbiology

Test Contact: Jim Glendinning (208) 334-2235 ext 253

Purpose of Test:

The AFB smear can determine the presence of mycobacteria in clinical specimens by microscopic examination. AFB smears are made from the sediments of specimens that have decontaminated and concentrated by centrifugation for culture. Special solid and liquid growth media are inoculated with the concentrated specimen for isolation and identification of mycobacteria.

Sample and Submission Guidelines:

Preferred Specimen: Sputum

Other Acceptable Specimens:

- Respiratory Aspirate
- Bronchial Lavage Fluid
- Body Fluids
- CSF
- Tissue

Required Specimen Volume: 5 mls sputum, aspirate or CSF; or 50 mls body fluid

Minimum Specimen Volume: > 2 mls sputum, aspirates, or CSF; or >20 mls body fluid

Specimen Container: Sterile container with screw-cap

Specimen Identification: Label container with patient's first and last name, include date and time of collection.

Special Instructions:

- First morning sputum is recommended
- Indicate specimen source on requisition.
- Include clinical diagnosis or relevant patient history on requisition

Shipping Requirements: Store and ship at refrigerated temperature 2-8°C.
Transport to lab as soon as possible.

Sample Rejection Criteria:

- Inappropriate specimen transport
- Inadequate sputum sample (not enough neutrophils present and/or too many squamous cells present which is indicative of saliva).
- Misabeled/Unlabeled sample
- Sample > 72 hours old

Method: Microscopy and Culture

Possible Results and Meaning:

AFB smear:

“Acid-fast Bacilli seen on smears from this sample. Culture results to follow.”

Limitation: The acid-fast stain cannot differentiate *M. tuberculosis* from other nontuberculous mycobacteria.

“No acid-fast bacilli seen on this smear. Culture results to follow.”

Limitation: A negative acid-fast smear does not rule out mycobacterial infection.

AFB Culture:

Positive culture-- Mycobacterial identification given.

Negative culture—“No mycobacteria were recovered from this specimen by culture”

Charge for test: Currently, there is no charge for TB services at the Bureau of Laboratories

Turn-Around-Time:

- 14-21 Days Positive Culture
- 6 Weeks Negative Culture
- Up to 28 Days for Susceptibility Testing